

FOCUS ON ENGINEERS & ARCHITECTS

Earth Engineering Incorporated

Founded in 1990, Earth Engineering Incorporated (EEI) prides itself on being a high quality full service geotechnical and environmental engineering consulting firm. With offices located in East Norriton, Lehigh Valley and Mechanicsburg, Pennsylvania as well as South Jersey, EEI is well equipped to service the entire 422 corridor.

EEI has specific expertise in Geotechnical Consulting, Subsurface Investigations, Infiltration Testing, Geotechnical Specialty Design Services, Environmental Site Assessments, and Clean Fill Analysis. Items such as cost-effectiveness of foundation alternatives are evaluated along with site development issues and geotechnical data to establish recommendations. This approach has enabled EEI to contribute to the successful development of many large-scale projects by adding true value to the planning process.

At EEI, our goal is to combine quality consulting and investigative work with on-time, on-budget performance. We're committed to providing our clients with the higher level of service and experience they have come to expect from EEI. Your success is our mission.

The 422 region is alive and well and the professionals at EEI, many of which who reside along the corridor, are ready to support the progress throughout the area. We at EEI look forward to contributing to the success of your next project. For additional information, please call 610.277.0880 or visit our website www.earthengineering.com.

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Gilmore & Associates, Inc.

The demand for green infrastructure and sustainable building and site design from both public and private clients has experienced significant growth in the last several years. Gilmore & Associates, Inc. is committed to a professional practice that embraces "Green" planning and engineering designs that utilize or emulate natural ecological systems to provide the essential services demanded by society while protecting or enhancing environmental quality. Whether serving public or private sector clients, the consulting professionals at Gilmore & Associates, Inc. understand the challenges and complexity of providing environmentally and economically sustainable infrastructure and building solutions.

Gilmore & Associates, Inc.'s "Green Infrastructure" services palette includes site analysis documentation and environmental resource inventories; Low Impact Development (LID) planning and design; LID and Green Building ordinance development; conservation planning and design; LEED® documentation including preliminary scoring and feasibility, project registration, value engineering and Green design audits; and "Green Stormwater Infrastructure" Best Management Practice (BMP) designs and system retrofits including detention basin naturalization and restoration, vegetated rain gardens, underground stormwater storage, engineered permeable pavement systems, vegetated building roofs, "green streets," and "green" retaining walls.

For more information on Gilmore & Associates, Inc.'s "Green" planning and engineering design services, please contact John P. Sartor, P.E. at jsartor@gilmore-assoc.com.



EARTH ENGINEERING INCORPORATED
Geotechnical Engineers & Geologists

We've Got The 422 Region Covered!



Subsurface Investigations Construction Inspection and
Geotechnical Design & Analysis Clean Fill Testing
Stormwater Infiltration Testing Laboratory Soils Testing
Carbonate Site Assessments Environmental Site Assessments
and Remediation

www.earthengineering.com

Corporate Headquarters: 610-277-0880

Central PA: 717-697-5701

Lehigh Valley: 610-967-4540

South Jersey: 856-768-1001

QUALITY * COMMITMENT * PERFORMANCE

Why Choose Ludgate Engineering?

There are many reasons such as a 40-year track record, the cohesion of our seasoned, effective staff, or the list of our past accomplishments but the best reason, to our many satisfied clients, is "cost-effectiveness". That phrase means we earn the fee we may be paid by delivering a survey, design, spec, or plan that not only gets the job done but balances the "return" and the "cost" - effectively.

If our client brings a structural problem to be corrected or a drainage problem to be solved we are Professional Engineers who address such problems with the goal of providing the optimal answer. That answer must address our client's true need or desire with a workable, constructable solution at an affordable cost.

That goal, to be Cost Effective, applies to all of the work we do, whether planning and zoning for a municipality, laying out a subdivision or development, providing a certified ALTA survey, or otherwise serving one of our many diverse client requests.

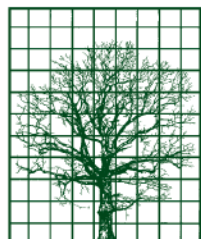
If you have a need which can be addressed by a Professional Civil Engineering and Land Surveying firm visit us on the web at www.ludgate-eng.com or call 610.404.7330.

McCarthy Engineering

McCarthy Engineering is a multi-disciplinary engineering design and consulting firm that offers excellence in Civil, Structural, Mechanical, Electrical, Plumbing, Regulatory, and Project Management disciplines for the public and private sectors. With over 40 employees, McCarthy Engineering is expanding and constantly evolving to stay up to date with the latest industry trends, technology, and regulations. President and CEO Jim McCarthy incorporated the business in June 2000 with a vision to create a different kind of engineering firm. That vision's success continues to unfold.

McCarthy Engineering takes pride in ... Engineering Your Success. For additional information, please call 610.373.8001, and visit www.McCarthy-Engineering.com.

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LUDGATE ENGINEERING CORPORATION

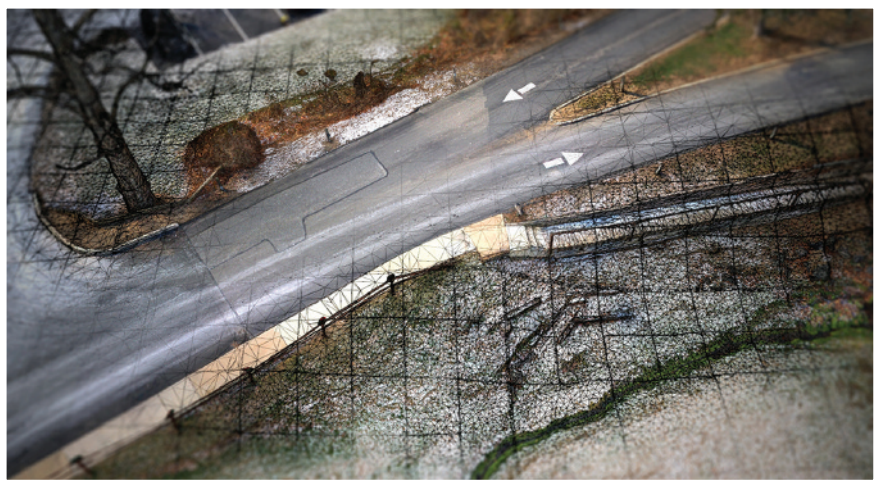
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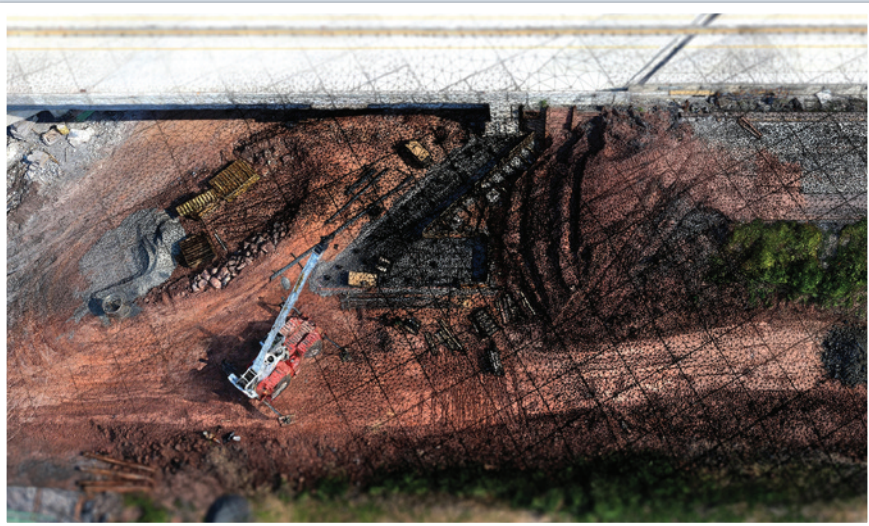
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CEDARVILLE Engineering Launches New Technology For Planning, Design & Construction

An Interview with April Barkasi, CEO, and Chris Skorny, 3D Modeling Specialist & UAV Pilot



Reality Modeling of Painters Crossing Roadway, Chadds Ford



State Route 422, Stowe Interchange



Reality Modeling of Eastern State Penitentiary, Philadelphia

What is "Reality Modeling" as it relates to engineering?

APRIL: We are challenging conventional engineering and construction survey methods by gathering GPS tagged images to generate 3D Reality Models.

CHRIS: It's the process of capturing existing conditions – structures, land, objects - in 3D. We use a combination of devices including an unmanned aerial vehicles (UAVs), a handheld camera, a laser scanner, and a smart phone. These images can be stitched together into a 3D model that can be used for different purposes such as planning, mapping, design, construction, inspection, and asset management.

How do you collect the data?

APRIL: It begins in the field. Chris and his team have developed a work flow that allows them to efficiently collect information. Depending on the site, there can be huge time savings over conventional survey methods.

CHRIS: For data collection via an UAV, the process starts by reviewing the site for possible constraints that could limit a flight. We establish an area of interest and set ground control from survey grade equipment i.e. GPS and/or total stations. A flight plan is created that determines exactly where to fly, the altitude to fly, and the frequency of image acquisition. While UAVs are a great tool, models can also be created by individuals on foot, or vehicle mounted equipment.

What type of businesses would benefit from this kind of technology?

APRIL: 3D Reality Models can be created to analyze the surface features of large parcels of land, roadways, and critical pieces of infrastructure. The data can be captured more efficiently than by using traditional survey methods. It's ideal for construction companies, engineering firms, government entities, or anyone responsible for managing land or infrastructure.

CHRIS: For example, the technology can be used to model busy highways, calculate quantity data on stockpiled or excavated materials, access restricted sites or any site where access can be hazardous, monitor changing conditions, or just to get a quick, quality survey.

Can you share any special projects you are currently working on?

APRIL: The latest special project is Eastern State Penitentiary in Philadelphia. This site had some challenging aspects to it, so we decided to use Reality Modeling technology.

CHRIS: This project utilized traditional survey, UAV, and ground based imagery capture methods. By combining all 3 of these data sets, we produced a model that had a precision of 1/4 of an inch for anything below 10 feet above the ground, and 2 inches for anything higher than that. We are able to use the model for the design phase of the project and again during actual construction.



CEDARVILLE

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<p>Civil Engineering Environmental Engineering 3D Reality Modeling Infrastructure Asset Management Design & GIS Soil Science</p>	<p>1033 S. Hanover St., Ste. 300 Pottstown, PA 19465 P: 610-705-4500 F: 610-705-4900 info@cedarvilleeng.com www.cedarvilleeng.com</p>
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P. Richard Frantz, AIA, Registered Architect

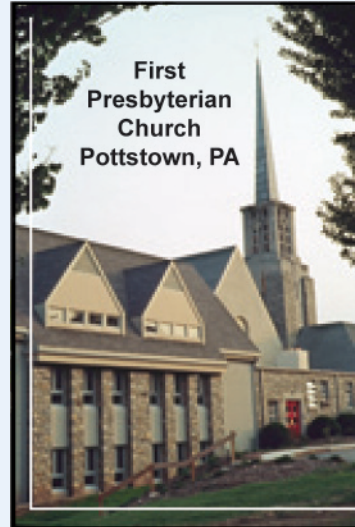
P. Richard Frantz, AIA, is a registered architect who has brought design solutions to clients throughout southeastern Pennsylvania. His proven design approach creates beautiful, functional, and efficient spaces in a range of styles from historic to contemporary. With office space located at 127 N. Hanover Street, Pottstown, he provides architectural service to Pottstown and surrounding communities.



In today's times, an architect is often a problem solver. He is called upon not only to design new buildings but also to evaluate existing construction, improve the use of

existing facilities, solve difficult site problems, and adapt existing structures by designing alterations and additions. Through a network of design, engineering, and construction professionals established over a lifelong career, Mr. Frantz has the solutions to meet a wide variety of commercial and residential needs. Specialty solutions include schools, churches, and historic preservation. Core services include design, construction drawings, bid management, construction oversight, and final inspection support.

Frantz's architectural firm offers his personalized attention to every project, throughout every phase, because clients work directly with him, the principle. When required, he'll bring in trusted outside consultants for a fresh approach to complicated assignments, and by networking with other architectural, engineering or construction firms, his combined workforce easily expands to complete the requirements for larger projects.



Design. With a pu[®]pose.

"We shape our buildings,
then they shape us."
— Winston Churchill

P. Richard Frantz, AIA
a[®]rchitect

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Mr. Frantz is registered in the Commonwealth of Pennsylvania. He is a member of the American Institute of Architects, and graduated from Pennsylvania State University with a Bachelor of Architecture degree. He serves as an arbitrator for the American Arbitration Association and is often called on as an expert witness. He is a member of the Rotary Club of Pottstown and has served on the Historic Architectural

Review Board, is a member of the Board of Trustees of the Pottstown Memorial Medical Center and Pottstown Area Industrial Development, Inc. (PAID) and is a former member of the Board of Directors of the Pottstown Area Health and Wellness Foundation and the Pottstown Downtown Improvement District Authority. Frantz can be reached at prf@prfrantz.com and welcomes a visit to his website at www.prfrantz.com.

*Congratulations on
Boyertown's 150*

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& ASSOCIATES**

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**Building Permit Plans...
The Maze.**

BE SURE TO ASK THESE IMPORTANT QUESTIONS!

How Do I know if I need a Building Permit Plan?	What other Agencies will be involved?
What does the typical Building Permit Plan consist of?	How long of a process is this?
What grading or elevation needs to be shown?	How much does a Building Permit Plan cost?

Where do I find the help I need to get a Building Permit Plan done? You need to look no further than All County & Associates, Inc. (ACA). ACA is a professional Land Surveying, Civil Engineering and Environmental Permitting firm located in southeastern Pennsylvania ready to serve your Building Permit needs. Our experienced staff works throughout Pennsylvania and has done so since our inception in 1992. As a full service company, ACA has the knowledge and experience to make your goals become a reality.

We offer many other services, including:

- Subdivision/Land Development Design
- Environmental Permitting
- Hydraulic Load Testing
- On-site Sewage Disposal System Inspections
- Boundary Surveys
- Wetland Investigations

On-site Sewage Disposal System Inspections...Let it flow.

BE SURE TO ASK THESE IMPORTANT QUESTIONS!

Are you buying a house served by a septic system?	What is a drainfield?
What type of Septic System do I have?	Should the septic system be inspected?
Where are the components of my Septic System located?	How much does an On-Site Sewage Disposal System Inspection cost?
What is a septic tank?	

Where do I find the help I need to get an On-site Sewage Disposal System Inspection done? You need to look no further than All County & Associates, Inc. (ACA). ACA is a professional Land Surveying, Civil Engineering and Environmental Permitting firm located in southeastern Pennsylvania ready to serve your On-site Sewage Disposal System Inspection needs. Our experienced staff performs inspections throughout eastern Pennsylvania and has done so since our inception in 1992. As a full-service company, ACA has the knowledge and experience to make your goals become a reality.

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- Environmental Permitting
- Boundary Surveys
- Hydraulic Load Testing
- Wetland Investigations
- Building Permit Plans

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